A CENTURY OF CONSERVATION
1901 2001
Montana Fish, Wildlife & Parks

August 24, 2001
1420 East 6th Ave.
P.O. Box 200701
Helena, MT 59620-0701

Environmental Quality Council
Montana Department of Environmental Quality
Montana Department of Fish, Wildlife and Parks
Fisheries Division
Endangered Species Coordinator
Nongame Coordinator
Bozeman Office
Montana State Library, Helena
MT Environmental Information Center
Montana Audubon Council
Gallatin County Conservation District, 3710 W. Fallon St., #B, Bozeman, MT 59718-6433
U.S. Army Corp of Engineers, Helena
U.S. Fish and Wildlife Service, Helena
State Historic Preservation Office, Helena
Gallatin National Forest, attn: Wally McClure
Montana Department of Transportation, attn: Jason Giard
Montana Trout Unlimited, attn: John Wilson

Ladies and Gentlemen: Beaver Creek Fish Passage Project

Please find enclosed an Environmental Assessment prepared for a project tentatively planned to modify portions of Beaver Creek located below perched culvert such that the grade of the stream will be brought up to the grade of the culvert and allow fish passage for spawning rainbow trout from the Gallatin River. Beaver Creek is a perennial tributary to the Gallatin River and is believed to be an important spawning area for rainbow trout. This proposed project is located on property owned by the Gallatin National Forest.

Please submit any comments that you have by 5:00 P.M., September 24, 2001 to the Department of Fish, Wildlife and Parks in Helena at the address listed above. Completion of this project is contingent upon approval being granted by the Gallatin National Forest. If you have any questions, feel free to contact me at (406) 444-5334.

Sincerely,

Glenn R. Phillips, Chief
Habitat Protection Bureau
Fisheries Division

Gallatin

ENVIRONMENTAL ASSESSMENT
Fisheries Division
Montana Fish, Wildlife and Parks
Beaver Creek Fish Passage Project

General Purpose: The Department of Fish, Wildlife and Parks commonly conducts projects to restore degraded fish habitat in rivers and lakes for the purpose of improving wild fisheries. The project being proposed involves construction of a step-pool channel in Beaver Creek downstream of a culvert crossing under Highway 191 in the Gallatin Canyon. The purpose of the project is to restore upstream fish passage. Beaver Creek is a tributary of the West Gallatin River which supports a predominantly rainbow trout fishery in the project area.

I. Location of Project: This proposed project would be located on Beaver Creek just downstream of where it crosses under Highway 191 in the Gallatin Canyon. Beaver Creek crosses the highway approximately 3 miles south of the turnoff to the Big Sky ski resort in T7S R4E section 16.

II. Need for the Project: One goal within Montana Fish, Wildlife and Parks six-year operations plan for the fisheries program is to "restore and enhance degraded habitats" by implementing habitat restoration projects. This proposed project would help achieve this goal.

Beaver Creek is a tributary to the West Gallatin River and is a known spawning area for rainbow trout. The culvert identified in this proposed project acts as a barrier to fish migration because of the perched nature of the pipe. Building a series of step pools below the pipe outlet will gradually bring the grade of the stream up to the culvert and enhance the passage of migrant spawners.

III. Scope of the Project:

The proposed project would include the following steps. Hauling rock to the construction site; dewatering of the construction site by diverting the stream into a remnant channel; removal and stockpiling of topsoil and sod from the access road; removal of smaller streambed materials and stockpiling larger materials; build up the stream bank on the north side of the creek; installation of willow cuttings along the south bank; placement of rip-rap around and under the culvert outlet; build a step pool channel using rock hauled to the site; stockpiling of native materials removed during construction; build up the stream bank on the south side of the creek; install willow rows; clean-up the site and return flow to the reconstructed channel; reclamation of disturbed areas including the access route to the previous condition. The project will effect approximately 75 ft of stream directly below the culvert. This project is expected to cost approximately $14,000. Funding partners include the Madison-Gallatin Chapter of Trout Unlimited, the Montana Department of Transportation, and Montana Fish, Wildlife and Parks.

IV. Environmental Impact Checklist:

Please see attached checklist.

V. Explanation of Impacts to the Physical Environment

1. Terrestrial and aquatic life and habitats.

Enhancing fish passage in Beaver Creek by bringing the grade of the stream up to the culvert may potentially increase recruitment of rainbow trout to the West Gallatin River. Rainbow trout have been observed trying to gain access to the culvert during spring spawning season.

2. Water quantity, quality and distribution.

Short-term, but minor, increases in turbidity will occur during project construction. To minimize turbidity, construction will occur during a low flow period and operation of equipment in the stream channel will be minimized to the extent practicable. The construction site will also be dewatered by diverting the stream into a nearby remnant channel. A 124 permit (Stream Protection Act) will be obtained and the U.S. Army Corp of Engineers will be contacted for requirements needed to meet the federal Clean Water Act (404 permit).

3. Geology and soil quality, stability and moisture.

Soils within the immediate project area would be disturbed during construction, but would be stabilized with re-vegetation efforts. The USFS will be consulted do determine the appropriate seed mixture for the site.

4. Vegetation cover, quantity and quality.

Riparian vegetation and cover would be disturbed within the immediate project area during the period of construction. However, proposed re-vegetation efforts would act to mitigate these disturbances. A determination will be made as to whether sensitive plants are present in the project area prior to initiating construction and if they are present, USFS guidelines for mitigation will be followed.

5. Aesthetics

Aesthetics of the site would be degraded during the short time frame of construction. Long term impacts to aesthetics would be negligible.

7. Unique, endangered, fragile, or limited environmental resources.

Enhancing fish passage will not pose a threat to native or endangered fishes. Since the culvert does not act as an isolation barrier, enhancing fish passage at this site will not threaten headwater populations. Grizzly bear, grey wolf, lynx, and bald eagle have been observed in the general location of the porject area but will not be affected by the project.

8. Historic and archaeological sites

An archeological survey of the project area was conducted by personnel from the Gallatin National

Forest. Cultural resources were not found in the immediate area of the project, however a prehistoric site is located approximately 30 meters to the east of the construction area. This site will not be disturbed during project construction.

VI. Explanation of Impacts on the Human Environment.

1. Access to & quality of recreational activities.

Beaver Creek is a perennial tributary to the West Gallatin River. Opening up the stream to spawning would potentially improve recruitment to the West Gallatin River.

VII. Discussion and Evaluation of Reasonable Alternatives.

1. No Action Alternative

If no action is taken, the culvert on Beaver Creek will continue to act as a barrier. As such, the passage of migrant spawners from the West Gallatin River will continue to be hindered and the potential for recruitment not realized.

2. The Proposed Alternative

The proposed alternative is designed to enhance fish passage at a culvert crossing located on Beaver Creek. Beaver Creek is a perennial tributary to the West Gallatin River. Enhancing fish passage at this culvert site would potentially increase recruitment of rainbow trout to the Gallatin River and, in turn, improve recreational fishing.

VIII. Environmental Assessment Conclusion Section

1. Is an EIS required? No.

We conclude from this review that the proposed activities will have a positive impact on the physical and human environment.

2. Level of public involvement.

This Environmental Assessment (EA) is being distributed to all individuals and groups listed on the cover letter. The EA will be published on Montana Fish, Wildlife and Parks web page: fwp.state.mt.us.

3. Duration of comment period?

Public comment will be accepted through 5:00 PM on September 24, 2001.

4. Person responsible for preparing the EA.

Glenn Phillips, Chief
Habitat Protection Bureau
Fisheries Division
Montana Department of Fish, Wildlife and Parks
1420 East 6th Avenue
Helena, MT 59620

Telephone: (406) 444-5334
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MONTANA DEPARTMENT OF FISH, WILDLIFE AND PARKS
1420 E 6th Ave, PO BOX 200701, Helena, MT 59620-0701
(406) 444-2535

ENVIRONMENTAL ASSESSMENT

Project Title Beaver Creek Fish Passage Project

Division/Bureau Fisheries Division, Habitat Protection Bureau

Description of Project The project is being proposed to re-establish fish passage at a perched culvert located on Beaver Creek - a tributary to the West Gallatin River. The culvert crosses under Highway 191 about three miles south of the turnoff to Big Sky Ski Resort. The project is located on lands of the Gallatin National Forest.

POTENTIAL IMPACT ON PHYSICAL ENVIRONMENT

	MAJOR	MODERATE	MINOR	NONE	UNKNOWN	COMMENTS ON ATTACHED PAGES
1. Terrestrial & aquatic life and habitats			X			X
2. Water quality, quantity & distribution			X			X
3. Geology & soil quality, stability & moisture			X			X
4. Vegetation cover, quantity & quality			X			X
5. Aesthetics			X			X
6. Air quality				X		
7. Unique, endangered, fragile, or limited environmental resources				X		X
8. Demands on environmental resources of land, water, air & energy				X		
9. Historical & archaeological sites				X		X

POTENTIAL IMPACTS ON THE HUMAN ENVIRONMENT

	MAJOR	MODERATE	MINOR	NONE	UNKNOWN	COMMENTS ON ATTACHED PAGES
1. Social structures & mores				X		
2. Cultural uniqueness & diversity				X		
3. Local & state tax base & tax revenue				X		
4. Agricultural or industrial production				X		
5. Human health				X		
6. Quantity & distribution of community & personal income				X		
7. Access to & quality of recreational and wilderness activities				X		
8. Quantity & distribution of employment				X		
9. Distribution & density of population & housing				X		
10. Demands for government services				X		
11. Industrial & commercial activity				X		
12. Demands for energy				X		
13. Locally adopted environmental plans & goals				X		
14. Transportation networks & traffic flows				X		

Other groups or agencies contacted or which may have overlapping jurisdiction Gallatin County Conservation District, US Fish and Wildlife Service, US Army Corp of Engineers, Montana Department of Environmental Quality, State Historic Preservation Office
Individuals or groups contributing to this EA Pat Byorth, Montana Fish, Wildlife and Parks; Wally McClure, Gallatin National Forest.

Recommendation concerning preparation of EIS No EIS required.
EA prepared by: Glenn Phillips

Date: August 14, 2001

United States Department of Agriculture | Forest Service | Gallatin National Forest | Supervisor's Office
10 East Babcock
P.O. Box 130
Bozeman, MT 59771

File Code: 2360 **Date:** July 26, 2001
Route To: Wally McClure

Subject: COMPLETION OF HERITAGE RESOURCES REVIEW for **MWF Beaver Ck Stream Structures**
(Project No. 01-GA-6-14)
To: District Ranger, Bozeman Ranger District

A Heritage Resources review for the above-named project is complete. The results are as follows:

FIELD INVENTORY COMPLETED

Investigator(s): Kristin Griffin

Date: 7/26/01

Methods: intensive survey

Results: **No sites** within area of expected area of disturbance

RECOMMENDATIONS:

The project, as regards cultural resources, **may proceed** as planned, now or at any time in the future. If cultural resources or artifacts are discovered (within National Forest road easement) during project implementation, the Forest Archeologist must be notified immediately

ADDITIONAL RECOMMENDATIONS / COMMENTS:

A prehistoric site is located along the bank of Beaver Creek, ca. 10m E of the area of potential effect, on a remnant of low alluvial bench undisturbed by road building and stream re-channeling. We recommend that efforts be made to avoid project-related ground disturbance (e.g. from vehicles, etc) in this area.

/s/Kristin Griffin, Archeological Technician

/s/ Walt
Walter E. Allen, Forest Archeologist